Form P	TO-	1449 U.S. Der	artr	nent of Con	nmerce	П	Application Number	09/460,216	
	- 0		nd T	rademark	Office	1	Filing Date	December 13, 1999	
				/45	O:- '	∖ II	Finet Named I	Graham P. Allaway	
INFOR	MAT	TION DISCLOSURE STA	ΓΕΜ	IENT	7 2006 s	ų	Art Unit Examiner Name	1648	
(Use sev	eral	sheets if necessary)		(AUG U		Ę	Examiner Name	Jeffrey S. Parkin	
				SHEW	CHERT	1	Attorney Docket No.	50875-F-PCT US/JPW/AG/LAD	
	,		U.S. I	PATENT DO	CUMEN	\mathbf{T}	S		
Examiner Initials	Cite No.1	Number-Kind Code ^{2 (if known)}	M	blication Date M-DD-YYYY	l		e of Patentee or Appl	icant of Cited Docum	ent
		U.S. 6,025,154	10-	-10-2004	Y. L	i	et al.		
		U.S. 6,265,184	07-	24-2001	P.W.	(Gray et al.		
		U.S. 6,268,477	07-	31-2002	P.W.	(Gray et al.		
		U.S. 6,488,375	09-	10-2002	M. Sa	ar	mson et al.		
		U.S. 6,511,826	01-	28-2003	Y. L:	i	et al.		
		U.S. 6,692,938	02-	17-2004	M. Sa	an	mson et al.		
		U.S. 6,743,594	06-	01-2004	Y. Li	Ĺ	et al.		•
		U.S. 6,972,126	12-	06-2005	G.P.	Į	Allaway et al	Ι.	
		U.S. 6,800,447	10-	05-2004	M. Sa	an	mson et al.		
		U.S. 6,800,729	10-	05-2004	Y. Li	L	et al.		
		U.S. 5,449,608	09-	12-1995	N. Yo	ου	ing et al.		
		U.S. 6,261,763 B1	07-	17-2001	G.P.	Z	Allaway et al	- •	
		U.S. 6,528,625	03-	04-2003	L. Wi	1	et al.		
		U.S. 6,930,174	08-	16-2005	M. Sa	ın	nson et al.		
		U.S. 6,100,087	08-	08-2000	J. Ro	S	si et al.		
		U.S. 5,939,320	08-	17-1999	D. Li	t	tman et al.		
-		U.S. 6,258,527	07-10-2001 D.		D. Li	D. Littman et al.			
		U.S. 6,258,782	07-	10-2001	S. Ba	r	ney et al.		
		FOR	EIG	AL ED A COPERAGO TO	00174	_	·mc		
Examiner	Cite	FOR Foreign Patent Document	EIGI	Publication		SI	Name of Patentee or A	Applicant of Cited	-m6
Initials*	No.1	Country Code ³ Number Kind Code ⁵	known)	MM-DD-Y			Docum		T ⁶
		WO 92/01451		02-06-19	92				
		WO 95/16789		06-22-19	95				
		WO 97/28258		08-07-19	97				
		NO 97/44462		11-27-19	97				
		NO 98/18826		05-07-19	98	_			
		NO 01/55439		08-02-20	001				
XAMINER IGNATURE				DATE CONSID	····				

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ² See Kinds of Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English Language Translation is attached.

Applicants: Graham P. Allaway et al.

Serial No.: 09/460.216 Filed: December 13, 1999

Exhibit A

Form P	TO	1440	HC D.				Application Number	09/460,216	
FOTIN F 	10-1	1449		-	nent of Con rademark		Filing Date	December 13, 1999	
Ì			ratent a	ma 1	rademark	Office	First Named Inventor	Graham P. Allawa	
INFOR	МАТ	TON DISC	LOSURE STA	TEM	ENT		Art Unit	1648	y et at.
I		sheets if ne		. 1 15141			Examiner Name	Jeffrey S. Parkin	
				-			Attorney Docket No.	50875-F-PCT US/JPW/AG/LAD	
				U.S. F	ATENT DO	CUMEN	rs		
Examiner Initials	Cite No.1	Number-K	nent Number ind Code ^{2 (if known)}	MM	olication Date M-DD-YYYY		ne of Patentee or Appl	icant of Cited Docum	nent
		U.S. 6,6		02-	17-2004	M. Sa	mson et al.		
		U.S. 5,0	71,964	12-	10-1991	M. Du	stin et al.		
		U.S. 5,0	91,513	02-	25-1992	J. Hu	ston et al.		
		U.S. 5,2	15,913	06-	01-1993	M.R.	Posner et al	•	
		U.S. 5,2	25,539	07-	06-1993	G.P.	Winter et al	•	
		U.S. 5,6	03,933	02-	18-1997	V.A.	Dwyer et al.	a - 111 - 11	
		U.S. 5,6	68,149	09-	16-1997		oszlan et al	•	
		U.S. 5,8	17,767	10-	06-1998	G.P.	Allaway et al	l.	
		บ.s. 5,8	54,400	12-	29-1988	T. Ch	ang et al.		
		U.S. 4,8	86,743	12-	12-1989	L.E.	Hood et al.		
,		U.S. 200	3/0023044	01-	30-2003	Y. Li	et al.		
		U.S. 200	5/0260565	11-	24-2005	P.W.	Gray et al.		
		U.S. 200	5/0118677	06-	02-2005	P.W.	Gray et al.		
		U.S. 200	3/0166870	09-	04-2003	L. Wu	et al.		
		U.S. 200	4/0259785	12-	23-2004	C. Coi	mbadiere et a	1.	
		U.S. 200	3/0195348	10-	16-2003	C. Coi	mbadiere et a	1.	
		U.S. 200	3/0096221	05-2	22-2003	D. Li	ttman et al.		
		U.S. 200	3/0003440	01-0	02-2003	L. Loj	palco et al.		
			FOI	REIGN	N PATENT D	OCUME	NTS		
Examiner Initials	Cite No.1	Foreign Country Code ³	Patent Document Number*Kind Code ^{5 (}	if known)	Publication MM-DD-Y		Name of Patentee or Docum		T ⁶
	7	NO 02/06	4612		08-22-20	002		<u> </u>	
	7	NO 01/589	915		08-16-20	01			1
	7	VO 01/589	916		08-16-20	001			
	7	VO 96/394			12-12-19	96			
		VO 97/226			06-26-19	97			
		VO 97/440		_	11-27-19	97	· · · · · · · · · · · · · · · · · · ·		
	V	NO 97/032	2019		09-04-19	97			
VARATRIES				7					

^{*}EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). See Kinds of Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. Applicant is to place a check mark here if English Language Translation is attached.

DATE CONSIDERED

EXAMINER

							Dago 2 of
Form P	Form PTO-1449			eartment of Com	merce	Application Number	Page 3 of 09/460,216
			<u>-</u>		Filing Date	December 13, 1999	
						First Named Inventor	Graham P. Allaway et
INFOR	NFORMATION DISCLOSURE STATEMENT					Art Unit	1648
(Use sev	eral	sheets if necessary)				Examiner Name	Jeffrey S. Parkin
						Attorney Docket No.	50875-F-PCT US/JPW/AG/LAD
			1	U.S. PATENT DOC	UMENT	rs	
Examiner Initials	Cite No.1	Document Number Number-Kind Code ^{2 (If kn}	own)	Publication Date MM-DD-YYYY	Nan	ne of Patentee or Appl	icant of Cited Document
		U.S. 2002/01508	88	10-17-2002	PW.	Grav et al	· · · · · · · · · · · · · · · · · · ·

Examiner Initials	Cite No.1		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		U.S. 2002/0150888	10-17-2002	P.W. Gray et al.
		U.S. 2004/0161739	08-19-2004	M. Samson et al.
		U.S. 2004/0230037	11-18-2004	P.W. Gray et al.
		U.S. 2004/0110127	06-10-2004	M. Samson et al.
		U.S. 2005/0154193	07-14-2005	V. Roschke et al.
		U.S. 2003/0100058	05-29-2003	V. Roschke et al.
		U.S. 2003/0166024	09-04-2003	C. Rosen et al.
		U.S. 2004/0151719	08-08-2004	Y. Li et al.
		U.S. 2001/0000241	04-12-2002	Y. Li et al.
		U.S. 2001/0046512	11-29-2001	V.M. Litwin et al.
		U.S. 2002/0048786	04-25-2002	C. Rosen et al.
		U.S. 2002/0061834	05-23-2002	C. Rosen et al.
		U.S. 2002/0110870	08-15-2002	M. Samson et al.
		U.S. 2003/0023044	01-30-2003	Y. Li et al.
		U.S. 2006/0029932	02-09-2006	G.P. Allaway et al.
]	U.S. 2006/0140977	6-29-2006	G.P. Allaway et al.
		U.S. 2002/0045161	04-18-2002	G.P. Allaway et al.
	T	J.S. 2004/0062767	04-01-2004	W.C. Olson et al.

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.1	Foreign Patent Document Country Code ⁵ Number ⁴ Kind Code ⁵ (If known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	T ⁶
		EP 9687002.1	03-01-1996		
		EP 96870102.9	08-06-1996		
		EP 1145721 A2	10-17-2001		
		EP 1146055 A2	10-17-2001		
		EP 1146122 A2	10-17-2001		
		EP 1148126 A2	10-24-2001		
		EP 1148127 A2	10-24-2001		
EXAMINER SIGNATURI			DATE CONSIDERED		i

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 'Applicant's unique citation designation number (optional). 'See Kinds of Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 'Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 'For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 'Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. Applicant is to place a check mark here if English Language Translation is attached.

Form P	TO-	1449	U.S. De	 partr	nent of Con	nmerce	Application Number	09/460,216		
			_	_	rademark (Filing Date	December 13, 1999		
							First Named Inventor	Graham P. Allawa		
INFOR	MA	FION DIS	CLOSURE STA	TEM	IENT		Art Unit	1648		
		sheets if n					Examiner Name	Jeffrey S. Parkin		
			-				Attorney Docket No.	50875-F-PCT US/JPW/AG/LAD		
		-		U.S. I	PATENT DO	CUMENT	rs			
Examiner Initials*	Cite No.1		ument Number -Kind Code ^{2 (If known)}		blication Date M-DD-YYYY					
	┼—	 		—		<u> </u>				
	┼			┼		ļ	 			
	-			+-		 				
	 			+-		 				
	<u> </u>					-				
				 		 				
	<u> </u>	<u> </u>		<u> </u>						
	<u> </u>			<u> </u>						
	 			 						
				 						
	 			 		-				
-				 		- 				
								W.		
										
L			FOR		N PATENT DO	OCUME:	NTS			
	Cite No.1	Forei Country Cod	ign Patent Document le ³ Number Kind Code ^{5 (tr}		Publication MM-DD-YY	Date	Name of Patentee or A		T ⁶	
	-	EP 11495	582 A2		10-31-20	01				
	-	EP 11993	360 A2		04-24-20	02	7-10-			
		EP 14820	J42 A1		12-01-20	04			┼┤	
	1	EP 08151	137		12-12-19	96			+-+	
	1	EP 08836	587 B1		11-27-20	04				
		CA 22169) 90		12-27-19	97				
XAMINER GNATURE	:			ľ	DATE CONSIDE	ERED				
										

^{*}EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). See Kinds of Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. Applicant is to place a check mark here if English Language Translation is attached.

Form **PTO-1449 U.S. Department of Commerce** Application Number 09/460,216 Patent and Trademark Office Filing Date December 13, 1999 First Named Inventor Graham P. Allaway et al. INFORMATION DISCLOSURE CITATION Art Unit 1648 (Use several sheets if necessary) Examiner Name Jeffrey S. Parkin Attorney Docket No. 50875-F-PCT US/JPW/AG/LAD NON PATENT LITERATURE DOCUMENTS Examiner Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the Cite T^2 Initials No.1 item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published. et al., "Effects (1992)Substitutions Outside An Antigenic Site On Protein Binding To Monoclonal Antibodies Of Predetermined Specificity Obtained By Peptide Immunization: Demonstration With Region 94-100 (Antigenic Site 3) Of Myoglobin", J. Prot. Chem. 11(5):433-443 Alexander, H. et al., (1992) "Altering The Antigenicity Of Proteins", Proc. Natl. Acad. Sci. 89:3352-3356 Alkhatib et al., (1996)Abstract At 3rd Conference Retroviruses Allan, Immunodeficiency Virus-Related J., (1997) "Human Infections In Animal Model Systems", In AIDS: Diagnosis, Treatment And Prevention, 4th Edition, Lippincott-Raven Publishers, Philadelphia, Pp 15-27 Allaway, G.P. et al., (1993) "Synergistic Inhibition Of HIV-1 Envelope-Mediated Cell Fusion By CD4-Based Molecules In Combination With Antibodies To gp120 Or gp41", AIDS Res Hum Retroviruses 9:581-587 Allaway, G.P. et al., (1995) "Expression And Characterization Of CD4-IgG2, A Novel Heterotetramer That Neutralizes Primary HIV Type 1 Isolates", AIDS Res Hum Retrovirus 11:533-539 Amara, A. et al., (1997) "HIV Coreceptor Downregulation As Antiviral Principle: SDF-llpha-Dependent Internalization Of The Chemokine Receptor CXCR4 Contributes To Inhibition Of HIV Replication", *J. Exp. Med.* 186:139-146 Arthos, J. et al., (1989) "Identification Of The Residues In Human CD4 Critical For The Binding Of HIV". Cell 57:469-481 Ashorn, P.A. et al., (1990) "Human Immunodeficiency Virus Envelope Glycoprotein/CD4 Mediated Fusion Of Nonprimate Cells With Human Cells", J. Virol. 64:2149-2156 Attanasio, R. et al., (1991) "Anti-Idiotypic Antibody Response To Monoclonal Anti-CD4 Preparations In Nonhuman Primate Species", J. Immunol. 146:507-514 et al., (1988) "Mechanism Of Inhibitory Effect Of Baba, M. Dextran Sulfate And Heparin On Replication Of Human Immunodeficiency Virus In Vitro", Proc. Natl. Acad. Sci. 85:6132-6136 Baulerle, P.A. And Huttner, W.B., (1987) "Tyrosine Sulfation Is A Trans-Golgi-Specific Protein Modification", Cell. Biol. 105:2655-2663 Benet et al. (1990) "Pharmacokinetics: The Dynamics Of Drug Absorption, Distribution And Elimination" In Goodman And Gilman's The Pharmacological Basis Of Therapeutics, Gilman Et El., Eds. Pergamon Press, New York, Pp 3-32

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 'Applicant's unique citation designation number (optional). ²Applicant is to place a checkmark here if English language Translation is attached.

DATE CONSIDERED

EXAMINER

Form PT	O-144	19 U.S. D	epartment of Commerce	Application Number	09/460,216				
		Paten	and Trademark Office	Filing Date	December 13, 1999				
				First Named Inventor	Graham P. Allaway et a				
INFORM	1ATI(ON DISCLOSURE	CITATION	Art Unit	1648				
(Use severa	al sheet	s if necessary)		Examiner Name	Jeffrey S. Parkin				
				Attorney Docket No.	50875-F-PCT				
					US/JPW/AG/LAD				
		NON	PATENT LITERATURE	DOCUMENTS					
Examiner Initials*	Cite No. ¹	item (book, magazine	uthor (in CAPITAL LETTERS), ti , journal, serial, symposium, catalo publisher, city and/or countr	og, etc.) date, page(s), volur y where published.	ne-issue number(s),	T ²			
		Berger, E.A. Symposium	et al (1996) Abstr	ract No. 002, 8	At Keystone				
		Berger, E.A., (1997) "HIV Entry And Tropism: The Chemokine Receptor Connection" AIDS 11(Suppl A):S3-S16							
		Berger, E.A. et al., (1999) "Chemokine Receptors As HIV-1							
		Coreceptors: Rev. Immunol.	Roles In Viral Entry 17:657-700	r, Tropism And D	isease", Ann.				
		Mediated By Mu	. et al., (1997) "H ltiple Regions Within cceptor", <i>EMBO</i> 16:259	n Both The Viral					
			et al., (1999) "Mul		And Aromatic				
			CR5 Amino-Terminal I						
		Biol. Chem. 27							
		Extracellular Coreceptor Act	t al., (1997) "Rol Domains Of CXCR4 In ivity", <i>J. Virol</i> . 71	Human Immunodefi ::4744-4751	ciency Virus				
		Glycoprotein-M Expressing Hu	et al., (1993) "Th dediated Membrane man CD4 Can Be C Virol. 193:483-491	Fusion In Ar	nimal Cells				
		Immunodeficien Cell Fusion Ar	al., (1995) "Syner cy Virus Type 1 Env nd Infection By An A th Anti-gp-120 Antib	elope Glycoprot Antibody To CD4	ein-Mediated Domain 2 In				
		4273			la l				
		Primary Isolat Antibody", <i>Sc</i>	et al., (1994) "E es Of HIV-1 By A Ro ience 266:1024-1027	ecombinant Human	n Monoclonal				
		Requires The Fo Uninfected T-C	al., (1991) "HIV-I ormation Of Conjugate ells In Vitro", <i>AID</i>	es Between Virus- S 5:1425-1432	Infected And				
		Mediated Syncy Site", <i>Cell</i> 60		Outside The Vi	rus Binding				
		And Chemokine Chem. Chemothe		erapeutic Targe	t", Antivir.				
			al., (1989) "Design Nature 337:525-531		dhesions For				
XAMINER IGNATURI			DATE CONSIDERED						

Form PT	O-14	49 U.S. Department of Commerce	Application Number	09/460,216			
		Patent and Trademark Office	Filing Date	December 13, 1999			
l			First Named Inventor	Graham P. Allaway et a	al.		
INFORM	IATI	ON DISCLOSURE CITATION	Art Unit	1648			
(Use severa	ıl sheet	ts if necessary)	Examiner Name	Jeffrey S. Parkin			
			Attorney Docket No.	50875-F-PCT			
				US/JPW/AG/LAD			
		NON PATENT LITERATURE	DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), ti item (book, magazine, journal, serial, symposium, catalo publisher, city and/or countr	og, etc.) date, page(s), volui y where published.	ne-issue number(s),	Γ ²		
		Chams, V. et al., (1992) "Simple A	ssay To Screen F	or Inhibitors			
•		Of Interaction Between The Hur		ciency Virus			
1				eptor, CD4",			
		Antimicrob Agents Chemother. 36(2)	:262-272				
j		Chan, D.C. et al., (1998) "Evidence	e That A Promine	ent Cavity In			
		The Coiled Coil Of HIV Type 1 Target", Proc. Natl. Acad. Sci. 95		ractive Drug			
		Chan, D.C. et al., (1998) "HIV Ent		nition" Call			
		93:681-684	ry And its infil	orcion, cerr			
		Charo, I.F. et al., (1994) "Molec	ular Cloning An	d Functional			
		Expression Of Two Monocyte Chemoat					
		Reveals Alternative Splicing Of Th	ne Carboxvl-Term	inal Tails".			
		Proc. Natl. Acad. Sci. 91:2752-275		,			
		Chen, Z. et al., (1997) "Geneti		Strains Of			
		Simian Immunodeficiency Virus Use CCR5 As A Coreceptor For					
	_	Entry", J. Virol. 71(4):2705-2714					
		Clapham, P.R. et al., (1989)		Blocks The			
		Infectivity Of Diverse Strains Of					
		Monocytes But Not For Brain And Mu 370	scie Cells", <i>Nat</i>	cure 337:368-			
			"Specific Ce	ell Surface			
		Requirements For The Infection Of	CD4-Positive Ce	lla Ry Human			
ĺ		Immunodeficiency Virus Types 1 And					
ł		Virus", Virol. 181:703-715					
		Co. M.S. et al., (1991) "Humanize	ed Antibodies Fo	or Antiviral			
· [Therapy" Proc. Natl. Acad. Sci. 88					
		Combadiere, C. et al., (1995)	"Cloning And	Functional			
		Expression Of A Human Eosinophil	CC Chemokine Re				
		Biol. Chem. 270:16941-16494		"			
		Combadiere, C. et al., (1996)					
		Expression Of CC CKR5, A Human Mon	ocyte CC Chemok	ine Receptor			
•		Selective For MIP-1 α , MIP-1 β , And	RANTES", J. Le	eukoc. Biol.			
		60:147-152	v1				
İ		Connor, R.I. et al., (1997) "Correlator With Discours Brown		eceptor Use			
		Correlates With Disease Progre Individuals", J. Exp. Med. 185:621	-628				
		Cormier, E. G. et al., (2000) "Sp					
		Amino-Terminal Domain Peptides Con	taining Sulfoty	rosines With			
		HIV-1 Envelope Glycoprotein gp120	", Proc. Natl.	Acad. Sci.	- 1		
		97:5762-5767			\dashv		
XAMINER		DATE CONSIDERED			- 1		
IGNATURI	E.		<u> </u>				

Form PT	O-14	49 U.S. Department of Commerce	Application Number	09/460,216	
		Patent and Trademark Office	Filing Date	December 13, 1999	
			First Named Inventor	Graham P. Allaway	et al.
INFORM	(ATI	ON DISCLOSURE CITATION	Art Unit	1648	
(Use severa	al sheet	s if necessary)	Examiner Name	Jeffrey S. Parkin	
		•		50875-F-PCT	
			<u></u>	US/JPW/AG/LAD	
		NON PATENT LITERATURE	DOCUMENTS		
Examiner Initials	Cite No.1	Include name of the author (in CAPITAL LETTERS), t item (book, magazine, journal, serial, symposium, catal publisher, city and/or count	og, etc.) date, page(s), volu		T ²
		Crowe, S.M. et al., (1992) "Hu		iency Virus-	
		Infected Monocyte-Derived Macropha			
		Fuse With CD4 Lymphoid Cells In V.			
		T Lymphocyte Depletion In Vivo",	Clin. Immunol	Immunopathol.	
		65 (2):143-151	: Cb :		
		Crump, M.P. et al., (1997) "Solut Functional Activity Of Strom			
	•	Disassociation Of CXCR4 Activation			
İ		Of HIV-1", EMBO 16:6996-7007	Dinaing A		
		Cushman, M. et al., (1991) "Prepar	ation And Anti-H	IIV Activities	
		Of Aurintricarboxylic Acid Fract	ions And Analo	gues: Direct	
		Correlation Of Antiviral Potency	With Molecular	Weight", J .	
		Med. Chem. 34:329-337			
		Dalgleish, A.G. et al., (1984)			
		Essential Component Of The Recept	or For The AIDS	Retrovirus"	
		Nature 312:763-766			
		Dalgleish, A.G., (1995) "HIV And (CD26", Nat. Med.	1:881-882	
		De Rossi, A. et al., (1995) "S			
		Principle Neutralizing Domain Of			
1		Type 1 (HIV-1) Enhance HIV-1 Infec	tion Through A	CD4-Dependent	
		Mechanism", Virology 184:187-196		,	
Ì		Dean, M. et al., (1996) "Genetic R And Progression To AIDS By A Do			
l		Structural Gene", Science 273:1856		Of the Ckks	
		Deen, K.C. et al., (1988) "A Solu		L(T4) Protein	
ŀ		Inhibits AIDS Virus Infection", Na		1,14, 11000111	
		Deng, X. et al., (1999) "A Synthet		ed From Human	
		Immunodeficiency Virus Type 1			
		Expression And Function Of Chemok:	ne Receptors CO	CR5 And CXCR4	
		In Monocytes By Activating The			
		Coupled Receptor FPRL1/LXA4R", Blo	od 94(4):1165-1	173	
		Dettin, M. et al., (2003) "CCR5 N-			
1		HIV-1 Infection By CXCR4 Up-Regulat	cion", Biochem.	Blophys. Res.	
		Commun. 307(3)640-646 Dimitrov, D.S. et al., (1991) "Init	rial Charge Of II	TV 1 Encelor	
		Glycoprotein-Mediated Cell Fusion			
		Based On Redistribution Of Fluor	. Monitored by escent Dves" :	A NEW ASSAY	
		Retroviruses 7(10):799-805	cacenc byes , A	res umi	
			CCR5 Receptor	Acts As An	
1		Alloantigen In CCR5∆32 Homozygous			
		Of Chemokine And HIV-1 Blocking Hu	man Antibodies",	Proc. Natl.	
		Acad. Sci. 95(9):5241-5245			
XAMINER		DATE CONSIDERED			
GNATURI					

Form PI	O-144	9 U.S. Department of Commerce	Application Number	Page 9 09/460,216				
		Patent and Trademark Office	Filing Date	December 13, 1999				
				Graham P. Allaway	y et al			
INFORM	/ATIO	ON DISCLOSURE CITATION	Art Unit	1648				
(Use sever	al sheet	s if necessary)	Examiner Name	Jeffrey S. Parkin				
		•	Attorney Docket No.	50875-F-PCT				
			<u> </u>	US/JPW/AG/LAD				
		NON PATENT LITERATURE						
Examiner Initials	Cite No. ¹	item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.						
		Donzella, G.A. et al., (1998)						
		Inhibitor Of HIV-1 Entry Via The 04:72-77						
		Doranz, B.J. et al., (1997) "Two Mediate Co-Receptor Usage By Human 1", J. Virol. 71:6305-6314						
		Dragic, T. et al., (1992) "Complem	entation Of Muri	ine Cells For				
		Human Immunodeficiency Virus Enve						
	i	Human/Murine Heterokaryons", J. V.						
		Dragic, T.V. et al., (1993) "						
		Membrane Fusion Mediated By						
		Immunodeficiency Virus Types 1 An 2359						
		Dragic, T.V. et al., (1995) "Prot Human Erythrocyte Membranes Mediat						
		Cells Expressing Human Immunodefic Glycoproteins", J. Virol. 69:1013-	ciency Virus Typ					
		Dragic, T.V. et al., (1998) "Amin		titutions In				
			gp120 Binding					
		Immunodeficiency Virus Type 1 Entr	y" J. Virol. 72	(1):279-285				
		Dragic, T.V. et al., (2000) "A	Binding Pocket	For A Small				
		Molecule Inhibitor Of HIV-1 Entr	y Within The T	ransmembrane				
		Helices Of CCR5", Proc. Natl. Acad						
		Ebadi, M., (1998) "The Pharmacokin In CRC Desk Reference Of Clinical Boca Raton, Pp. 1-7						
		Eckert, D.M. et al., (1999) "Inhib	iting HIV-1 Entr	y: Discovery				
		Of D-Peptide Inhibitors That Ta	rget The gp41	Coiled-Coil				
		Pocket", Cell 99:103-115						
		Eugene-Olsen, J. et al., (1997) "Ho						
l		In The CKR-5 Gene Leads To Prolor Slower CD4 T-Cell Decline In A	Cohort Of HIV-	Seropositive				
		Individuals", AIDS 11:305-310	CONOIC OF HIV.	Seropositive				
		Farzan, M. et al., (1998) "A Tyro	sine-Rich Regio	n In The N-				
		Terminus Of CCR5 Is Important For I	Human Immunodefi	ciency Virus				
		Type 1 Entry And Mediates Associat:						
		J. Virol. 72:1160-1164						
		Farzan, M. et al., (1999) "Tyrosi Terminus Of CCR5 Facilitates HIV-1						
		Farzan, M. et al., (2000) "A Tyrosi						
1		The N Terminus Of CCR5 Interacts Wi	th A CD4-Enhance	d Epitope Of				

EXAMINER SIGNATURE DATE CONSIDERED

Entry", J. Biol. Chem. 275:33416-33521

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). Applicant is to place a checkmark here if English language Translation is attached.

The HIV-1 gp 120 Envelope Glycoprotein And Inhibits HIV-1

Form PT	O-144	U.S. Department of Commerce	Application Number	09/460,216				
	0	Patent and Trademark Office	Filing Date	December 13, 1999				
		Tatent and Tradenark Office		Graham P. Allaway	at al			
INFORM	1ATI	ON DISCLOSURE CITATION	Art Unit	1648	et ai.			
		s if necessary)	Examiner Name					
Cone never	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	on necessary)	Attorney Docket No.	Jeffrey S. Parkin 50875-F-PCT				
			Attorney Docket 140.	US/JPW/AG/LAD				
		NON PATENT LITERATURE	DOCUMENTS					
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), ti item (book, magazine, journal, serial, symposium, catal publisher, city and/or country	og, etc.) date, page(s), volu ry where published.	ime-issue number(s),	T ²			
		Feng, Y. et al., (1996) Abstr Symposium	act No. 116,21	At Keystone				
		Ferrer, M. et al., (1999) "Select						
		Cell Entry Inhibitors From Biased						
		Non-Natural Binding Elements", Na	ture Struct. Bi	01. 6:953-959				
	Fouchier, R.A. et al., (1994) "HIV-1 Macrophage Tropism Is Determined At Multiple Levels Of The Viral Replication Cycle", J. Clin. Invest. 94:1806-1814							
		Fouts, T.R. et al., (1997) "Ne	eutralization C	f The Human				
		Immunodeficiency Virus Type 1 Pri	mary Isolate JF	R-FL By Human				
i		Monoclonal Antibodies Correlates	With Antibody B	inding To The				
	Oligomeric Form Of The Envelope Glycoprotein Complex", J .							
Virol. 71:2779-2785 Freed, E.O. et al., (1991) "Identification Of Conserved								
								Residues In The Human Immunodeficiency Virus Type 1 Principal
		Neutralizing Determinant That Are	e Involved In F	Susion", AIDS				
		Res. Hum. Retroviruses. 7(10):807-						
		Fradd, F. and Mary, M.E. (1989) "A Guide By Shearman Lehaman Hutton",	AIDS Vaccines: A Page 10 (Fig.	An Investor's 2)				
		Frazer, J.K. and Capra, J.D., (1999) "Immunoglobulins: Structure And Function" Fundamental Immunology, 4th Edition, Lippincott-Raven Publishers, Philadelphia, Pp. 37-74						
	-	Furuta, R.A. et al., (1998) "Captu Conformation Of HIV-1 gp41", <i>Natur</i>						
		Gauduin, M.C. et al., (1996) "Effe Of Human Immunodeficiency Virus Recombinant Immunoglobulin Molecul	Type 1 in es", J. Virol.	Plasma By 70:2586-2592	-			
		Gauduin, M.C. et al., (1997) "Passi Monoclonal Antibody Protects hu-PBI By Primary Isolates Of HIV-1", Nat	-SCID Mice Again . Med. 3:1389-1	nst Challenge 393				
		Ghorpade, A. et al, (1998) "Role C CCR3 And CCR5 In Human Immunodefic Of Monocytes And Microglia", <i>J. Vi</i>	iency Virus Type rol. 72:3351-33	e 1 Infection 61				
		Golding, H. et al., (1992) "LFA-1 Involved In The Early Stages O	Adhesion Molec f HIV-1.env-Me	ules Are Not ediated Cell				
		Membrane Fusion", AIDS Res. Hum. R						
		Graham, B.S. et al., (1995) "Can Engl. J. Med. 333:1331-1339	didate AIDS Va	ccines", <i>New</i>				
XAMINER IGNATUR		DATE CONSIDERED						
EW A NAVIOR								

	J 177	9 U.S. Department of Commerce Patent and Trademark Office	Application Number	09/460,216						
			Filing Date	December 13, 1999						
		Tatent and Hademark Office	First Named Inventor	<u> </u>						
	IATIO	ON DISCLOSURE CITATION	Art Unit	1648	et ai.					
(Use sever:		s if necessary)	Examiner Name	Jeffrey S. Parkin						
,		,	Attorney Docket No.	50875-F-PCT						
			· ·	US/JPW/AG/LAD						
		NON PATENT LITERATURE	DOCUMENTS							
Examiner Initials	Cite No. ¹	in the state of th								
		Grene, E. et al., (2001) "Anti-CCR Positive Individuals", Human Immur								
		Harouse, J.M. et al., (1991) "Inhibition Of Entry Of HIV-1 In Neural Cell Lines By Antibodies Against Galactosyl Ceramide",								
		Science, 253:320-323 Harrington, R.D. And Geballe, A.P., (1993) "Cofactor								
		Requirement For Human Immunodeficiency Virus Type 1 Entry Into A CD4-Expressing Human Cell Line", J. Virol 67:5939-5947								
		He, J. et al., (1997) "CCR3 And CCI	R5 Are Co-Recepto							
		Infection Of Microglia", Nature 38 Heath, et al., (1997) "Chemokin		as Dir Himan						
		Eosinophils. The Importance Of (CCR3 Demonstrat	ed Using An						
<u> </u>		Antagonistic Monoclonal Antibody",	J. Clin. Invest	. 99:178-184						
		Heidenreich, O. et al., (1995) Technology To Therapeutics", Mol.	"Application (Of Antisense 8-133						
		Hildreth, J.E. et al., (1989) " Adhesion Receptor (LFA-1) In HIV-I Science 244:1075-1078								
	•	Hill, C.M. et al., (1998) "The Ami Required For Its Function As A Rec Simian Immunodeficiency Virus Envel 248:357-371	ceptor For Diver lope Glycoproteir	se Human And ns", Virology						
		Hirata, Y., (1989) "Characteri Expression By Monoclonal And Polycl 143(9):2900-2906								
		Hirsch, M.S. et al., (1997) "Antir <i>Biology, Diagnosis, Treatment, An</i> Lippincott-Raven Publishers, Phila	nd Prevention, 4 delphia, Pp. 495	4th Edition, 5-508						
		Hwang, S. et al., (1991) "Identif Loop As The Primary Determinant (Science 253:71-74	Of Cell Tropism	In HIV-1,"						
		Jacobson, J.M. et al., (1993) "Pa Treatment Of Advanced Human Immunoo J. Infect. Dis. 168:298-305	deficiency Virus	Infection",						
		Jacobson, J. et al., (1999) "Resu Single-Dose PRO 542, A Novel Abstracts Of The 39th Interscience Agents And Chemotherapy 14	Inhibitor Of E Conference On A	HIV Entry", ntimicrobial						
		Ji, H. et al., (1999) "Inhibition Virus Type 1 Infectivity By The gp4 Hydrophobic Cavity In Membrane Fus	11 Core: Role Of	A Conserved						
XAMINER IGNATURI		DATE CONSIDERED								

Form PT	O-14 4	9 U.S. I	Department of Commerce	Application Number	09/460,216	
				Filing Date	December 13, 1999	
					<u> </u>	
INFORM	ATIO	N DISCLOSURE	CITATION	Art Unit	1648	
(Use severa	l sheets	s if necessary)		Examiner Name	Jeffrey S. Parkin	
					50875-F-PCT	
				<u></u>	US/JPW/AG/LAD	
		NON	PATENT LITERATURE	E DOCUMENTS		
Examiner Initials*	Cite No. ¹					
		Jiang, S. et <i>Nature</i> 365: 1	al., (1993) "HIV-1		A Peptide",	
		Treatment And 2:31-48	et al., (1991) "P Prevention Of HIV I (1994) "Human Monoc	nfection", Bio	tech. Therap.	
		Immunotherapy	Of HIV-1" Antibiot. et al., (1977) "A Fl	Chemother. 46:2	25-37	
		Of Cell Fusion	n" <i>J. Cell Sci</i> . 28:1 et al., (1998) "Po	67-177		
		Replication I Mediated Virus	n Humans By T-20, A s Entry", Nat. Med.	Peptide Inhibi 4:1302-1307	tor Of gp41-	
		Phage-Displaye Chemokine Red Structure Of	al. (2000) "Monoc ed Random Peptide L ceptor CCR5: Impl The Receptor And For 20", Eur. J. Immnol.	ibrary Reveals ications For ' An N-Terminal	Mimotopes Of The Tertiary Binding Site	
		Konishi, K. e Chemokine Rec HIV-1 Infectio	t al., (2000) "Synt eptor CCR5 And Their on", <i>Chem. Pharm. Bu</i>	hesis Of Peptic Inhibitory Eff 11 (Tokyo) 48(2)	les Mimicking Tects Against :308-309	
		HIV-1 Transmis	al., (1996) "Definingsion In Hu-PBL-SCID	Mice", Immunolo	gy. 8:263-268	
		Glycoprotein 1 Human Antibody	al., (1998) "Structu in Complex With The C r", Nature 393:648-65	D4 Receptor And	Neutralizing	
		Immunodeficier Monoclonal Ant	l., (1994) "Synergis cy Virus Type l ibodies", <i>J. Virol</i> 6	By Combination 58:4001-4008	ns Of Human	
		Neutralization	et al., (1999) "Fusio Of Primary Isolates	Of HIV", Scienc	e 283:357-362	
	:	Multiple Confo Structures Inv Chem. 274:9617		nd Distinct But preceptor Function	Overlapping on", J. Biol.	
] [Domains Of C-C Simian Immuno 166(12):7446-7		And The In Vita Infectivity",	ro Effects On J. Immunol.	
	E	SIV/HIV Type 1 Envelope Monoc	(1997) "Synergistic Virus With Combinati lonal Antibodies Or P oviruses 13:647-56	ons Of Human Ant	i-HIV Type 1	
XAMINER			DATE CONSIDERED			

Form PT	O-144	49 U.S. Department of Commerce	Application Number	09/460,216	
			Filing Date	December 13, 1999	
			First Named Inventor		
INFORM	1ATIO		Art Unit	1648	y ce un
(Use several sheets if necessary) Examiner Name Jeffrey S. Parkin Attorney Docket No. 50875-F-PCT			Jeffrey S. Parkin		
				US/JPW/AG/LAD	
· · · · · · · · · · · · · · · · · · ·		NON PATENT LITERATURE	DOCUMENTS		
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title item (book, magazine, journal, serial, symposium, catalog publisher, city and/or country	, etc.) date, page(s), volur		T ²
		Li, A.H. et al., (1998) "Synergisti	.c Neutralizatio		
		Human Immunodeficiency Virus SHIV-V			
		Combination Of Human Monoclonal			
		Antihuman Immunodeficiency Virus T	Type 1 Immunogl	obulins", J.	
		Virol. 72:3235-3240		T. 1	
		Mack, M. et al., (1998) "Aminooxyg Internalization But Inhibits Recy			
		Mechanisms Of HIV Infectivity", J.			
		Mackay, C.R., (1996) "Chemokine	Recentors	And T Cell	
		Chemotaxis", J. Exp. Med 84: 799-80		1 (611	
		Maddon, P.J. et al., (1986) "The T4	Gene Encodes T	ne AIDS Virus	
		Receptor And Is Expressed In The Im			
		Cell 47:333-348			
		Markosyan, R.M. et al., (2002) "The			-
		HIV-1 Entry Env-Mediated Cell-Cell		binant Cores	
		Of gp41 Ectodomain", Virology 302:1			
İ		Mateu, M.G. et al. (1992) "Non-Ad			
ł		Amino Acid Substitutions On Anti		ecognition",	
		European J. Immunol. 22(6):1385-138 Max, E., "Immunoglobulins: Molecu		Fundamental	
		<u> </u>	incott-Raven	Publishers,	
		Philadelphia, 1999 Pp. 11-182	Ancocc Raven	rubiishers,	
		Mitsuya, H. et al., (1985) "Prote	ection Of T Ce	ells Against	
		Infectivity And Cytopathic Effect			
		Retroviruses In Human Lymphoma Leuk	emia Japan Sci,	Soc. Press,	
		Tokyo/VNU Science Press, Utrecht Pr			
		Mittler, R.S. et al. (1989) "Syner			
		gp120-Specific Antibody In Blocking	Human T. Cell	Activation",	
		Science 245:1380-1382	add Dalamana 3	A No. 03-	
		Mohan, P. et al., (1992) "Sulfonic A Of Human Immunodeficiency Virus In			
		18:139-150	midicors", And		
		Mosier, D.E., (1990) "Immunodefici	ent Mice Xenoc	rafted With	
ĺ		Human Lymphoid Cells: New Models Fo	or In-Vivo Stud	ies Of Human	
		Immunobiology And Infectious Dise			
	···	10(4):185-191			
Ţ		Nagasawa, T. et al., (1994) "Molecul			
		A Pre-B-Cell Growth-Stimulating Fa	ctor", Proc.	Natl. Acad.	
		Sci. 91:2305-2309			
		Nagashima, K.A. et al., (2001) "Hu			
		Type 1 Entry Inhibitors PRO 542			
		Synergistic In Blocking Virus-Cell	And Cell-Cell	rusion", J.	
		Infect. Dis. 183:1121-1125		i	

DATE CONSIDERED

EXAMINER

Form PTO-1449 Application Number 09/460,216 U.S. Department of Commerce Filing Date Patent and Trademark Office December 13, 1999 First Named Inventor Graham P. Allaway et al. INFORMATION DISCLOSURE CITATION Art Unit (Use several sheets if necessary) Examiner Name Jeffrey S. Parkin Attorney Docket No. 50875-F-PCT US/JPW/AG/LAD NON PATENT LITERATURE DOCUMENTS Examiner Cite Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the T^2 No.1 Initials item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published. Nakano, T. et al., (1995) "Vascular Smooth Muscle Cell-Derived, Gla-Containing Growth-Potentiating Factor For Ca(2+)-Mobilizing Growth Factors", J. Biol. Chem. 270(11):5702-5705 Neote, "Molecular Cloning, K. et al., (1993) Expression, And Signaling Characteristics Of A C-C Chemokine Receptor", Cell 72:415-425 O'Brien, W.A. et al., (1990) "HIV-1 Tropism For Mononuclear Phagocytes Can Be Determined By Regions Of gp120 Outside Of The CD4-Binding Domain", Nature 348:69-73 Olson, W.C. et al., (1999) "Differential Inhibition Of Human Immunodeficiency Virus Type 1 Fusion, gp 120 Binding And CC-Chemokine Activity Of Monoclonal Antibodies To CCR5", J. Virol. 73:4145-4155 Oppermann, M. (2004) "Chemokine Receptor CCR5: Insights Into Structure, Function, And Regulation", Cell. Signal. 16:1201-Parren, P.W. et al., (2001) "Antibody Protects Macaques Against Challenge With A Pathogenic R5 Simian/Human Immunodeficiency Virus At Serum Levels Giving Complete Neutralization In Vitro" J. Virol. 75:8340-8347 Partidos, C. et al., (1992) "The Effect Of Orientation Of Epitopes On The Immunogenicity Of Chimeric Synthetic Peptides Representing Measles Virus Protein Sequences", Molecular Immunology 29(5):651-658 Peden, K. et al., (1991) "Changes In Growth Properties On Passage In Tissue Culture Of Viruses Derived From Infectious Molecular Clones Of HIV-1LAI, HIV-1MAL, And HIV-1ELI", Virol. 185:661-672 Poignard, P. et al., (1999) "Neutralizing Antibodies Have Limited Effects On The Control Of Established HIV-1 Infection In Vivo", Immunity 10:431-438 Posner, M.R. et al., (1993) "Neutralization Of HIV-1 By F105, A Human Monoclonal Antibody To The CD4 Binding Site Of gp120", J. Acq. Immune Defic. Synd. 6:7-14 Power, C.A. et al., (1995) "Molecular Cloning And Functional Expression Of A Novel CC Chemokine Receptor cDNA From A Human Basophilic Cell Line", J. Biol. Chem. 270:19495-19500 Proudfoot, A.E. et al., (1996) "Extension Of Recombinant Human RANTES By The Retention Of The Initiating Methionine Produces A Potent Antagonist", J. Biol. Chem. 271:2599-2603 Queen, C. et al., (1989) "A Humanized Antibody That Binds To The Interleukin 2 Receptor", Proc. Natl. Acad. Sci 86:10029-10033 **EXAMINER** DATE CONSIDERED SIGNATURE

Form PTO-1449 Application Number **U.S. Department of Commerce** 09/460,216 **Patent and Trademark Office** Filing Date December 13, 1999 First Named Inventor Graham P. Allaway et al. INFORMATION DISCLOSURE CITATION Art Unit 1648 (Use several sheets if necessary) Examiner Name Jeffrey S. Parkin Attorney Docket No. 50875-F-PCT US/JPW/AG/LAD NON PATENT LITERATURE DOCUMENTS Cite Examiner Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the T^2 Initials* No.1 item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published. Rabut, G.E. et al., (1991) "Alanine Substitutions Of Polar And Nonpolar Residues In The Amino-Terminal Domain Of Differently Impair Entry Of Macrophage And Dualtropic Isolates Of Human Immunodeficiency Virus Type 1", J. Virol. 72:3464-3468 Raport, C.J. et al., (1996) "Molecular Cloning And Functional Characterization Of A Novel Human CC-Chemokine Receptor (CCR5) For RANTES, MIP-1 β , And MIP-1 α ", J.Biol. Chem. 271:1761-17166 Rodriguez, G. et al (1995) "Mediation Of Human Immunodeficiency Virus Type 1 Binding By Interaction Of Cell Surface Heparin Sulfate Proteoglycans With V3 Region Of Envelope gp120-gp41", J. Virol. 69:2233-2239 Rucker, J. et al., (1996) "Regions In B-Chemokine Receptors CCR5 And CCR2b That Determine HIV-1 Cofactor Specificity", Cell 87:437-446 Ruffing, N. et al., (1998) "CCR5 Has An Expanded Ligand-Binding Repertoire And Is The Primary Receptor Used By MCP-2 On Activated T-Cells", Cell. Immunol. 189:160-168 Rudikoff, S. et al., (1982) "Single Amino Acid Substitution Altering Antigen-Binding Specificity", Proc. Natl. Acad. Sci. 79:1979-1983 Rusche, J.R. et al., (1988) "Antibodies That Inhibit Fusion Of Human Immunodeficiency Virus-Infected Cells Bind A 24-Amino Acid Sequence Of The Viral Envelope gp120", Proc. Natl. Acad. Sci. 85:3198-3202 Sagg, M. (1997) "Clinical Spectrum Of Human Immunodefilency Treatment And Virus Diseases" AIDS: Biology, Diagnosis, Prevention, Lippincott-Raven Publishers, Philadelphia, Pp. 203-213 Sandberg, Slikker, W., J. and (1995)"Developmental Pharmacology And Toxicology Of Anti-HIV Therapeutic Agents: Dideoxynucleosides", FASEB J. 9:1157-1163 Sandstorm, E.G. And Kaplan, J.C., (1987) "Antiviral Therapy In AIDS: Clinical Pharmacological Properties And Therapeutic Experience To Date", Drugs 34:372-390 Sato, A.I. et al., (1992) "Anti-CD7 Reagents Inhibit HIV-1 Induced Syncytium Formation," International Conference On AIDS. 81. PA5 Poa 2017 Sato, A.I. et al., (1994) "Identification Of CD7 Glycoprotein As An Accessory Molecule In HIV-1 Mediated Syncytium Formation And Cell Free Infection", J. Immunol. 152:5142-5152 Sato, A.I. et al., (1995) "A Simple And Rapid Method For Preliminary Evaluation Of In Vivo Efficacy Of Anti-HIV Compounds In Mice", Antivir. Res. 27:151-163

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). Applicant is to place a checkmark here if English language Translation is attached.

DATE CONSIDERED

EXAMINER

Form P1	<u> </u>	II C Department of Commone	Application Number	Page 16	<u>of 1</u>	
roim .	. U-1 -	U.S. Department of Commerce Patent and Trademark Office	Filing Date	09/460,216 December 13, 1999		
		ratent and Trademark Office	First Named Inventor			
INFORM	/ATI(ON DISCLOSURE CITATION	Art Unit	Graham P. Allaway 1648	et ai.	
(Use several sheets if necessary)			Examiner Name Attorney Docket No.	Jeffrey S. Parkin 50875-F-PCT		
			Attorney Ducket 140.	US/JPW/AG/LAD		
		NON PATENT LITERATUR	E DOCUMENTS	Obigi Titilojilii		
Examiner	Cite			T^2		
Initials*	No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.				
		Schanberg, L.W. et al., (1995) "C Transgenic Mice", J. Of Immunol.	155: 2407-2418			
		Schmidtmayerova, H. et al., (1993) PAR, A Macrophage-Tropic Strain: (And Nucleotide Sequence Of The En In Virology 144(1):21-26	Cell Tropism, Vir velope Glycoprote	us/Cell Entry ein. <i>Research</i>		
		Schols, D. et al., (1990) "Dextrar Anti-HIV Compounds Specifically I Glycoprotein Expressed By T-Cells HIV-1", Virol. 175:556-561	interact With The s Persistently I	Viral gp120 nfected With		
		Schols, D. et al., (1991) "Select Polyhydroxycarboxylates Derived Fr Human Immunodeficiency Virus Re Defic. Synd. 4:677-685	om Phenolic Compo	ounds Against		
		Schols, D. et al., (1999) "CD26-Pr Intact RANTES, Has Potent Anti-HI 30:175-187	V-1 Activity", Ar	tiviral Res.		
		Sinangil, F. et al., (1988) "Quant Between Human Immunodeficiency Vi Membrane Fluorescence Dequenching	rus And Cultured	Cells Using		
		Sommerfelt, M.A. et al., (199 Molecule 3, A Candidate Human Immu Receptor On Lymphoid And Monocyt 76:1345-1352	5) "Intercellul nodeficiency Viru coid Cells", J.	s Type 1 Co-		
		Stein, D.S. et al., (1993) Scientific Rationale And Promising Of The Human Immunodeficiency Viru <i>Infect. Dis.</i> 17:749-771	g Approaches To T	herapeutics: he Treatment dual", Clin.		
		Steinberger, P. et al., (2000) "Ge Of A Recombinant Human CCR5-Specif 275:36073-36078	Eic Antibody", J.	Biol. Chem.		
		Stewart, G.J., (1997) "Increase Heterozygotes Among Long-Term I Infection", <i>AIDS</i> 11:1833-1838	Non-Progressors	With HIV-1		
		Strizki, J.M. et al., (1997) "A Directed Against CXCR4 Inhibits In Human Immunodeficiency Virus Type : The T-Tropic Isolate HIV-1 Hxb", :	fection With The 1 Isolates HIV-1	Dual-Tropic 89.6 But Not		
		Su, S.B. et al., (1996) "Prepara Antibodies To A C-C Chemokine Recep Of CCR1 Expression On Various Type Biol. 60:658-666	tion Of Specific ptor, CCR1, And D es Of Leukocytes [*]	Polyclonal etermination J. Leukoc.		
	[1	Szabo, G. Jr. et al., (1993) "Spec Bound Anti-LAM-1 (Anti-Sel Aurintricarboxylic Acid, <i>" Molecula</i>	ectin) Antibo	odies By		

DATE CONSIDERED

EXAMINER

Page 17 of 19

09/460,216 Form **PTO-1449** Application Number **U.S. Department of Commerce** Filing Date December 13, 1999 **Patent and Trademark Office** Graham P. Allaway et al. First Named Inventor INFORMATION DISCLOSURE CITATION Art Unit 1648 (Use several sheets if necessary) Examiner Name Jeffrey S. Parkin Attorney Docket No. 50875-F-PCT US/JPW/AG/LAD NON PATENT LITERATURE DOCUMENTS Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the T² Examiner Cite Initials No.1 item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published. Μ. (1992) "Cooperativity et al., Of Neutralizing Antibodies Directed Against The VS And CD4 Binding Regions Of The Human Immunodeficiency Virus gpl20 Envelope Glycoprotein", J. Acq. Immun. Defic. Synd. 5:591-599 Tilley, S. A. (1992) "Synergistic Neutralization Of HIV-1 By Human Monoclonal Antibodies Against The V3 Loop And The CD4-Binding Site gp120", AIDS Research And Human Retroviruses 80:4:461-467 Tilley, S. A. et al., (1991) "Potent Neutralization Of HIV-1 By Human And Chimpanzee Monoclonal Antibodies Directed Against Three Distinct Epitope Clusters Of gp120", Sixieme Colloque Des Cent Gardes. 211-216 Travis, B.M. et al., (1992) "Functional Roles Of The V3 Hypervariable Region Of HIV-1 gp160 In The Processing Of gp160 And In The Formation Of Syncytia In CD4-Positive Cells", Virol. 186:313-317 Tremblay, C.L. et al. (2000) "Strong In Vitro Synergy Observed Between The Fusion Inhibitor T-20 And A CXCR4 Blocker AMD-3100.", 7th Conference On Retroviruses And Opportunistic Infections Abstract 500 Tremblay, C.L. et al., (1999) "Strong In Vitro Synergy Between The Fusion Inhibitor T-20 And The CXCR4 Blocker AMD-3100", J.Acq. Immun. Defici. Synd. 25(2)99-102 Trkola, A. et al., (2001) "Potent, Broad-Spectrum Inhibition Of Human Immunodeficiency Virus Type 1 By The CCR5 Monoclonal Antibody PRO 140", J. Virol. 75:579-588 Trkola, A et al (1999) "Cross-Clade Neutralization Of Primary Isolates Of Human Immunodeficiency Virus Type 1 By Human Monoclonal Antibodies And Tetrameric CD4-IgG", J. 69:6609-6617 Trkola, A. et al., (1998) "Neutralization Sensitivity Of Human Immunodeficiency Virus Type 1 Primary Isolates To Antibodies And CD4-based Reagents Is Independent Of Coreceptor Usage", J.Virol. 72:1876-1885 Tulip, W.R. et al., (1992) "Crystal Structures Of Two Mutant Neraminidase-Antibody Complexes With Amino Acid Substitutions In The Interface", J. Mol. Biol. 227:149-159 (1990) Α. Valentin, et al., "The Leukocyte Adhesion Glycoprotein CD18 Induced Syncytia Participates In HIV Formation In Monocytoid And T Cells", J. Immunol. 144:934-937 Valenzuela, A. et al., (1997) "Neutralizing Antibodies Against The V3 Loop Of Human Immunodeficiency Virus Type 1 Block The CD4-Dependent And Independent Binding Of Virus To Cells", J.Virol. 71(11):8289-8298 Vanini, S. et al., (1992) "Discrete Regions Of HIV-1 gp41 Defined Ву Syncytia-Inhibiting Affinity-Purified Human Antibodies", AIDS 7:167-174 **EXAMINER** DATE CONSIDERED SIGNATURE

			Department of Commerce t and Trademark Office	Application Number Filing Date	09/460,216 December 13, 1999	
INFORMATION DISCLOSURI (Use several sheets if necessary)			E CITATION	First Named Inventor	Graham P. Allaway et	
				Art Unit	1648	
				Examiner Name	Jeffrey S. Parkin	
				Attorney Docket No.	50875-F-PCT	
				<u> </u>	US/JPW/AG/LAD	
		NON	PATENT LITERATURE	DOCUMENTS		
Examiner Initials*	Initials No. item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number publisher, city and/or country where published.				propriate), title of the me-issue number(s),	T ²
		Dependent Cel Glycoprotein	c. et al., (1997) Dependent Epitopes O 1-To-Cell Fusion Med: Of A Primary Macrop cad. Sci. 94:9326-933	f gp120/gp41 In iated By The Nat hage-Tropic HIV	ive Envelope	
	-	Vijh-Warrier,	S, (1996) "Synergis	tic Neutralizat	ion Of Human	
		Immunodeficier Antibody Agai Monoclonal An Site", J. Viro	ncy Virus Type 1 E nst The V2 Domain O tibodies Against The ol. 70:4466-4473	By A Chimpanzee E gp120 In Comb V3 Loop And The	e Monoclonal pination With c CD4-Binding	
		CCR5 Receptor	J. et al., (2000) "I Is Blocked By Recepto			
		Acad. Sci. 97 Vita, C. et a	., (1999) "Rational	Engineering Of A	A Miniprotein	
		Envelope Glyco	es The Core Of The CD4 oprotein", <i>Proc. Natl</i>	. Acad. Sci. 96	:13091-13096	
	_	CD4 Transgeni Antibodies Fro	al., (1994) "Deletic c Mice Induced By H om AIDS Patients", Eu	IV- $gp120$ And gp	120-Specific 24:1553-1557	
		Heterokaryon I Fluorescence-A 30(12):1297-13		nance Energy Tra ", J. Histochem.	ansfer And A & Cytochem.	
		Suppression Ar	., et al., (1989) "id Lymphocyte Destruc Immunol. 142:3091-3	tion In The Abse	iated Immune ence Of Viral	
		Wild, C. et al Immunodeficien Solution Struc <i>Sci</i> . 89:10537-	., (1992) "A Syntheti cy Virus Replicat cture And Viral Inhi 10541	c Peptide Inhibi ion: Correlati bition", <i>Proc</i> .	on Between Natl. Acad.	
		A Potent Inhik <i>Res. Hum. Retr</i>	., (1993) "A Syntheti Ditor Of Virus Mediat Coviruses 9:1051-1053	ced Cell-Cell F	usion", AIDS	
		Alpha-Helical gp41 Are Poter Acad. Sci. 91:		unodeficiency V us Infection",	rirus Type 1 Proc. Natl.	
		1 Peptide Cor	., (1995) "The Inhibi relates With Its Al Structure", AIDS Res	oility To Inter	ract With A	
XAMINER IGNATURI			DATE CONSIDERED			

Patent and Trademark Office INFORMATION DISCLOSURE CITATION (Use several sheets if necessary) NON PATENT LITERATURE DOCUMENTS	
Art Unit 1648 Examiner Name Jeffrey S. Parkin Attorney Docket No. 50875-F-PCT US/JPW/AG/LAI	
Art Unit 1648 Examiner Name Jeffrey S. Parkin Attorney Docket No. 50875-F-PCT US/JPW/AG/LAI	av et al.
(Use several sheets if necessary) Examiner Name Attorney Docket No. 50875-F-PCT US/JPW/AG/LAI	
NON PATENT LITERATURE DOCUMENTS Examiner Initials No. Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published. Wu, L. et al., (1997) "Interaction Of Chemokine Receptor CCR! With Its Ligands: Multiple Domains For HIV-1 gp120 Binding And A Single Domain For Chemokine Binding", J. Exper. Med 186(8):1373-1381 Yamagami, S. et al., (1994) "cDNA Cloning And Functional Expression Of Human Monocyte Chemoattractant Protein Receptor", Biochem. Biophys. Res. Commun. 212:1156-1162 Ylisastigui, L. et al., (1998) "Synthetic Full Length And Truncated RANTES Inhibit HIV-1 Infection Or Primary	
NON PATENT LITERATURE DOCUMENTS Examiner Initials	
Examiner Initials No. Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published. Wu, L. et al., (1997) "Interaction Of Chemokine Receptor CCR! With Its Ligands: Multiple Domains For HIV-1 gp120 Binding And A Single Domain For Chemokine Binding", J. Exper. Med 186(8):1373-1381 Yamagami, S. et al., (1994) "cDNA Cloning And Functional Expression Of Human Monocyte Chemoattractant Protein Receptor", Biochem. Biophys. Res. Commun. 212:1156-1162 Ylisastigui, L. et al., (1998) "Synthetic Full Length And Truncated RANTES Inhibit HIV-1 Infection Or Primary	
Initials No.' item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published. Wu, L. et al., (1997) "Interaction Of Chemokine Receptor CCR! With Its Ligands: Multiple Domains For HIV-1 gp120 Binding And A Single Domain For Chemokine Binding", J. Exper. Med 186(8):1373-1381 Yamagami, S. et al., (1994) "cDNA Cloning And Functional Expression Of Human Monocyte Chemoattractant Protein Receptor", Biochem. Biophys. Res. Commun. 212:1156-1162 Ylisastigui, L. et al., (1998) "Synthetic Full Length And Truncated RANTES Inhibit HIV-1 Infection Or Primary	
Wu, L. et al., (1997) "Interaction Of Chemokine Receptor CCR! With Its Ligands: Multiple Domains For HIV-1 gp120 Binding And A Single Domain For Chemokine Binding", J. Exper. Med 186(8):1373-1381 Yamagami, S. et al., (1994) "cDNA Cloning And Functional Expression Of Human Monocyte Chemoattractant Protein Receptor", Biochem. Biophys. Res. Commun. 212:1156-1162 Ylisastigui, L. et al., (1998) "Synthetic Full Length And Truncated RANTES Inhibit HIV-1 Infection Or Primary	T ²
A Single Domain For Chemokine Binding", J. Exper. Med 186(8):1373-1381 Yamagami, S. et al., (1994) "cDNA Cloning And Functional Expression Of Human Monocyte Chemoattractant Protein Receptor", Biochem. Biophys. Res. Commun. 212:1156-1162 Ylisastigui, L. et al., (1998) "Synthetic Full Length And Truncated RANTES Inhibit HIV-1 Infection Or Primary	5
186(8):1373-1381 Yamagami, S. et al., (1994) "cDNA Cloning And Functional Expression Of Human Monocyte Chemoattractant Protein Receptor", Biochem. Biophys. Res. Commun. 212:1156-1162 Ylisastigui, L. et al., (1998) "Synthetic Full Length And Truncated RANTES Inhibit HIV-1 Infection Or Primary	∄
Expression Of Human Monocyte Chemoattractant Protein Receptor", Biochem. Biophys. Res. Commun. 212:1156-1162 Ylisastigui, L. et al., (1998) "Synthetic Full Length And Truncated RANTES Inhibit HIV-1 Infection Or Primary	,
Receptor", Biochem. Biophys. Res. Commun. 212:1156-1162 Ylisastigui, L. et al., (1998) "Synthetic Full Length And Truncated RANTES Inhibit HIV-1 Infection Or Primary	-
Ylisastigui, L. et al., (1998) "Synthetic Full Length And Truncated RANTES Inhibit HIV-1 Infection Or Primary	-
Truncated RANTES Inhibit HIV-1 Infection Or Primary	
XAMINER DATE CONSIDERED IGNATURE	